Enabling Scalable, Profitable Growth No 201, March 2026

As our inaugural newsletter from LMA Consulting's founding in 2005, Profit through People remains our flagship brand because although most clients call us because of our manufacturing, supply chain and technology expertise, the 80/20 of success goes straight to people!

Lisa's Note

Hope you had a fabulous holiday season and your New Year is off to a great start!

I went to Arizona and spent time with my mom and family. I have been going frequently to help my mom and aunt. Things don't get easier as you get older! The good news is that my mom's new adopted cat (who she calls Baby as his adopted name is too hard to remember and not a cat name) is bringing them joy.

In addition, I went to Las Vegas for a trip to see the Wizard of Oz with my best friend Vicki. I caught the apple which Vicki loved. It was a great experience and worth checking out. We also went to a relaxing extravaganza in Puerto Rico to celebrate her 70th birthday (check out the photo). I also went to a few retirement parties for friends and am planning a celebration trip with my other best friend, Sandi and her husband as well.

From a work perspective, we had a great year and helped clients achieve significant results (improved / superior customer experience, customer and EBITDA growth and working capital improvement) using supply chain transformation/ **SIOP** (Sales Inventory Operations Planning), supply chain planning (demand, production, replenishment, inventory, capacity etc.) and MRP upgrades, and the better utilization and optimization of ERP and related technologies including **artificial intelligence** and advanced technologies.

Check out these strategies in our **Best of Supply Chain** webpage. In addition, we are receiving great feedback on our eBook, **AI & Advanced Technologies in Manufacturing: How AI Powers Smart Supply Chains and Smarter Decisions**. Last but not least, we are excited that we launched our podcast, **Supply Chain Chats**, on all podcast platforms. Stay tuned for the latest insights on our **website** or podcast platforms such as **Spotify**.

We are also thrilled to have launched a visual that brings the 80/20 together for LMA's services (planning & supply chain transformation, process optimization & harmonization, and ERP & technology performance), how they integrate with the supply chain, SIOP, and

ERP, and resulting benefits to the organization (predictability, resiliency, scalability, visibility, sustainability, profitability and growth).

IN THE NEWS

I am thrilled to be a featured speaker at the **Valve Manufacturers Association (VMA) Annual Meeting**. With a passion for creating manufacturing momentum, what could be better than speaking to a key group as valves are spread across countless industries and all types of manufacturing.

And for the rest:

- Quoted in Charter Institute of Logistics and Transport's (CILT) *World In Motion* article, "**Trump's Tariffs**"
- Published articles in *Adhesives & Sealants,* **Key Trends and Technologies Powering Distribution Success**, **Sustainability and Smart Manufacturing in Building Products Supply Chains**, and **Medical Products Driving Manufacturing, Mining and Construction**.
- Published an article in *Medical Products Outsourcing* (MPO), **Strategic Partnerships in the Medical Products Supply Chain**.
- Published articles in *Brushware Magazine,* **AI and Advanced Technologies for Manufacturing Scalability and Success** and **Positioning for Success in the New Year**.
- Featured as a nominee for the L.A. Times **Inspirational Women Awards**.
- Featured on the **Lou Desmond radio show** and podcast about what's trending in logistics, the economy, and with critical minerals.
- Spoke on the *Interlinks* podcast, "**Supply Chain Visibility in the Age of AI: Strategy Meets Execution**".
- Spoke on *Manufacturing Matters* podcast, "**Supply Chain - Smoothing Out or Something Else**?
- Participated in a panel discussion on an ASCM-IE webinar, "**China & the Supply Chain: Geopolitical Realities and Trade Strategies**"
- Interviewed by PBS for a segment on tariffs and trade impacts on the supply chain.
- Featured on the ASCM-IE Adapting Supply Chain webinar, "**Tariffs & Turbulence: Strategies for Supply Chain Resilience**"
- Published press releases on **Manufacturing Month** and **Highlighting the Power of Technology and Data in Supply Chain Decision Making**.

Enjoy this newsletter with our case studies highlighting SIOP, planning and technology. This edition will focus on the importance of SIOP in fueling speed, scope and scale,

demand planning and how to stay in front of changing customer conditions, and utilizing a SIOP platform to fuel growth, mitigate complexity and enhance performance.

Enjoy,
Lisa

P.S. Know anyone who is interested in getting ahead of the rapidly changing global business conditions by creating predictable revenue and profitable supply? Refer them to us.

STRATEGY/ SIOP

Supply Chain Transformation: Predictable, Profitable, Intelligent

Companies are showing increasing interest in supply chain transformation as they want to create predictability, scalability, agility, and sustainable, profitable growth. Yet the key question is, "what is supply chain transformation?" Depending on the client, they might be thinking about supply chain network design, setting strategy for their end-to-end supply chain, upgrading their demand planning or supply planning processes, better utilizing their ERP system and advanced supply chain technologies in conjunction with their supply chain processes, deciding what to produce where (internal, external), upgrading their e-commerce and distribution processes, optimizing inventory, freight, and margins, or a myriad of other topics. Although clients use the term for a wide array of topics, the work they typically are asking for includes upgrades to the supply chain planning/ order fulfillment processes in conjunction with the use of ERP and advanced technologies. We will address what supply chain transformation means to LMA and how **SIOP** (Sales Inventory Operations Planning), **ERP** and **artificial intelligence** / advanced technologies fit in the picture.

What is Supply Chain Transformation?
We see supply chain transformation as an organized, enterprise-wide effort to redesign how a company plans, buys, makes, moves, and delivers products in a way that improves supply chain performance so that it is faster, more reliable, more scalable, and more profitable. In essence, it transforms the supply chain from a reactive and fragmented one

to a proactive, aligned and high-performing one. A transformation includes the end-to-end supply chain from planning and procurement to manufacturing and operations to logistics (distribution, warehousing, fulfillment transportation) and systems and data. The bottom line is that it is an integrated change across people, process, and technology to upgrade business maturity to deliver customer value and profitable growth. We see a supply chain transformation resulting in business systems maturity that reflects a predictable, profitable, and intelligent supply chain.

What Is Included in a Supply Chain Transformation?
Since a supply chain transformation is an integrated approach to upgrading supply chain maturity with a focus on prioritizing the results most relevant to success, it will emphasize different aspects of the supply chain yet consider the full scope of supply chain processes. We see it as an upgrade to whichever of these process areas are important to the company's objectives including:

- **Demand Planning/ Sales Forecasting**: Forecasting what customers will buy - sales revenue and/or units sold over a predefined period of time. This process combines historical trends, sales pipeline opportunities (opportunities, quotes), customer commitments and contracts, seasonality and market conditions, customer demand and POS (point of sale) data, sales and customer input, and other information. Sales forecasting systems and CRM (customer relationship management) systems such as Salesforce mainly support this function.
- **Quote Conversion/ Configuration**: In engineer-to-order (ETO) and configure-to-order (CTO) custom manufacturing environments, converting quotes to orders (also referred to as estimating, project management, configuration, and developing parts lists) is vital to success. Moving potential sales from opportunities to quotes to orders (while gaining additional product and unit of measure clarity) is at the heart of these businesses. CRM and CPQ (configure, pricing, quote) systems support this function.
- **Customer Service/ Order Management**: Customer service, order management, and service policies are the disciplines that ensure customer orders are captured correctly, fulfilled reliably, and managed consistently across the organization in a way that provides a predictable and superior customer experience at scale and efficiently. Customer relationship management (CRM), available to promise (ATP), EDI, e-commerce systems such as Spotify, customer portals, and artificial intelligence technologies support these functions. In ETO/ CTO environments related to building and construction industries, installation schedules and release sets are at the forefront whereas in e-commerce environments, the digital shopping experience and returns functionality (Amazon-like) is of paramount importance.
- **Master Planning/ Scheduling**: Master planning, also known as Master Production Scheduling or MPS, translates demand into a time-phased plan for what a company will produce (by product and by period) while considering and optimizing capacity, inventory, operational efficiencies, and customer service levels (OTIF, lead times). Advanced planning systems (APS) and **MPS/ MRP** systems support these functions. APS capabilities can dynamically reallocate production among sites and reroute incoming materials and shipments to optimize service, capacity availability, operational performance, freight and logistics costs, and inventory levels.
- **Capacity Planning**: Capacity planning is the process of determining whether your business has enough resources (labor, equipment, space, tooling, maintenance, supplier capacity, transportation capacity) to meet demand, addressing gaps, and optimizing resources across the business. Labor planning for high-volume environments with multiple shift types, schedules and requirements provide a good example for optimization software. CRP and APS functionality supports these processes.
- **Production Scheduling:** Production scheduling is the process of determining the exact sequence and timing of work on the shop floor (what gets made, on which line or machine, and when) to ensure a superior customer experience, greater operational efficiencies (labor, waste, throughput), and optimized inventory. Work orders/ production orders, related planning workbenches (MRP), production wheel and kanban systems typically support this function.
- **Procurement**: Procurement includes the processes of sourcing, purchasing and managing supplier strategy, cost, risk and performance of buying the products, raw

materials and components, equipment, packaging, and outside services that a company needs to operate. Blanket orders, supplier portals, EDI and APIs (application program interface), and MRP is typical functionality that supports these processes.

- **Engineering**: Engineering processes ensure products and processes are designed in a way that supports manufacturability, supply continuity, cost control, and scalability. In a custom environment (ETO/ CTO), Engineering drives the supply chain. From configuring and estimating quotes to determining lead times, feasibility, and material/ capacity constraints to designing products, developing specs and producing bills of materials to managing change orders and revisions, Engineering is embedded in supply chain transformations. Product configurators (CTO), design programs, document and drawing control software, ELM, ECO/ ECN (change notices), BOMs, items and attributes, routings, and other functionality supports these processes.
- **Manufacturing Operations**: This topic includes the supply chain components that impact scheduling, capacity, throughput, efficiency, waste, and other operational principles to ensure effectiveness, flow, and performance. ERP functionality such as bills of materials (BOMs), routings, work centers, labor and capacity settings (CRP, labor tracking), manufacturing execution systems (MES) are prevalent to driving success.
- **Replenishment / Distribution Plannin**g/ **VMI (Vendor managed inventory)**: Replenishment planning is the process of determining what and how much to send distribution centers, manufacturing sites, stores, branches, service centers, or customers to keep inventory at the appropriate levels while meeting customer needs. MRP/ DRP and inventory replenishment/ optimization system functionality support success.
- **Distribution & Warehousing Operations**: Distribution and warehousing is the part of the supply chain responsible for storing, moving, picking, packing, and shipping inventory efficiently and effectively to customers with high levels of service. Inventory management (levels, accuracy) is embedded in efficient and effective operations. ERP functionality (shipping, receiving, transfers, inventory, cycle counting), WMS, automation technologies, and returns (RMAs) functionality (ERP and e-commerce) support these functions.
- **Transportation & goods movement**: Transportation and goods movement is the part of the supply chain focused on moving materials and finished goods between suppliers, plants, warehouses, and customers safely, on time, and at the lowest total cost. TMS and supply chain visibility functionality support these functions. Import/ export is also ingrained in these processes.
- **ERP Systems, Data & Advanced Technologies**: The better utilization, optimization and upgrade of ERP systems, reporting and analytics (business intelligence), automation and robotics, artificial intelligence and advanced technologies enhance visibility, scalability, repeatability, sustainability, serviceability and profitability. The key for supply chain transformation is to upgrade processes in conjunction with the use of systems. Typical ERP systems range from SAP and Oracle to Microsoft Dynamics, JD Edwards, Epicor and Sage to specialty systems. For supply chain transformation, CRM, CPQ, demand planning, advanced planning, WMS, TMS, and supply chain visibility systems are key. From a reporting and analytics standpoint, business intelligence systems such as Power BI are integral.
- **SIOP (Sales Inventory Operations Planning)**: SIOP is a cross-functional process that aligns sales demand, inventory strategy, and operational capacity so the company can meet customer needs while hitting financial goals. SIOP replaces parallel plans with a single one. SIOP cuts across much of the functionality and technologies in addition to performing data normalization, business logic calculations, what if scenario analyses, virtual model simulations (digital twins), business intelligence (BI) and predictive analytics. Depending on the client's technology platform, we roll out the appropriate upgrades and/or leverage our SIOP platform (that we translate into data software and/or Power Queries and BI for sustainability) to fuel results.

Although a supply chain transformation will typically encompass upgrades across several of these functions, that alone is not sufficient. Instead of a collection of silo upgrades, a supply chain transformation must provide step level change in enterprise-wide maturity. A

supply chain transformation progresses from silo focused to repeatable and defined processes to managed, data-driven processes to integrated, embedded and optimized processes to scale for growth and profitability.

How Does SIOP Relate to Supply Chain Transformations?
SIOP fuels supply chain transformations.

The key to success is to drive sustained, directional progress so that executives have the information required to make decisions to increase the value of their business - increasing market share, growth, profitability, and working capital. We view SIOP as inclusive of not just the SIOP process and cadence, but also the enhancement and progression of business systems maturity to fuel business performance and financial success. Progressive executives expect SIOP to drive supply chain transformation and ensure bottom line results. They understand the integrated value and essential nature of utilizing SIOP to set strategy while having the ability to drill down to the "right" level of detail to make quick yet fully informed decisions to drive business value and scalable growth. To learn more about how to rollout SIOP, download a complimentary copy of our book, "**SIOP (Sales Inventory Operations Planning): Creating Predictable Revenue and EBITDA Growth**".

How Does ERP Relate to Supply Chain Transformations?
ERP is integral to supply chain transformation.

ERP plays a foundational role in supply chain transformation because it provides the data backbone and process discipline required to run an integrated, scalable operation. Without ERP, supply chain transformation initiatives tend to stall, get stuck in silos, or rely on spreadsheets and manual workarounds. Supply chain transformations require visibility from demand through delivery, requiring significant use of ERP for customer orders, inventory levels across facilities, production schedules, purchase orders, and related financial impacts). Standard, repeatable processes are integral to scale without increasing complexity and include ERP functionality from order-to-cash, procure-to-pay, plan-to-produce, and forecast-to-fulfillment. Modern supply chains depend on coordinated planning, and ERP provides the transactional engine that supports MRP and DRP, production scheduling, ATP and safety stock / inventory policies. ERP also provides a single source of truth for key metrics such as OTIF (on-time-in-full), inventory turns, inventory accuracy, production output, supplier performance etc. Finally, ERP provides the backbone to scale across complexity and feeds advanced systems with data and executes their outputs.

How Does Artificial Intelligence Relate to Supply Chain Transformations?
AI enables and accelerates supply chain transformations.

Artificial intelligence powers smart supply chains and smarter decisions - better decisions, faster execution, and fewer surprises at scale. The best companies utilize AI to improve planning (demand planning, anomaly detection, inventory optimization, and scenario planning), enhance visibility and the speed of decision-making (exceptions, priorities, quicker identification of patterns/ bottlenecks, etc.), improve customer service and provide a superior customer value. Download our **eBook** to read more about strategies to utilize AI for manufacturers and in the supply chain to power results and enable supply chain transformations.

Supply Chain Transformation Case Study
An electrical equipment supplier struggled to provide realistic lead times to customers and meet customer needs as customer orders ramped up and the team struggled with a new ERP system. Thus, leadership requested a supply chain transformation to provide better visibility for communication with customers, better predictability for forecasting revenue for their private equity backers, and better forecastability in capacity and materials planning to scale profitably.

A supply chain transformation was required to upgrade foundational processes and the use of systems, uplevel with advanced processes, artificial intelligence and advanced

technologies, and upskill the team. There were so many moving parts that the team had to jump into the details, track down the status of orders throughout the process (from configuration and order entry to engineering, planning, operations, assembly, quality and shipping), and follow the spaghetti diagram of logic to determine the product configuration and associated operational requirements. The team developed an interim toolset to automate and clarify order data and status while gaining a directional view of operational capacity and activity with a heijunka board to gain visibility into the revenue forecast.

Simultaneously, the team purused an across-the-board upgrade of supply chain processes and better use of their ERP system to sustain the progress. This supply chain transformation focused on the improved setup of item attributes, routings, phantoms, work centers, and other fields while also configuring, setting up and rolling out key planning and operations capabilities (capacity planning, MRP, production scheduling, and exception reporting). They accompanied these improvements with the upgrade of their SIOP (Sales Inventory Operations Planning) process to proactively align demand and supply and developed plans to utilize advanced planning system (APS) functionality. Finally, they focused significant resources, invested in **consultants**, and hired key resources to support and upskill the team, develop cross-functional capabilities, and elevate performance.

These improvements were significant and resulted in greater visibility to customer due dates, significantly improved predictability of revenue, enhanced availability of materials to support production plans, and greater operational efficiency with the foresight of schedules.These improvements supported record-breaking revenue and growth.

The Bottom Line
Supply chain transformation creates predictability in manufacturing operations and extended supply chains. The best companies are combining business system upgrades (process, ERP and related technologies) with the upskililng of talent, rollout of predictive and intelligent processes like SIOP and the exploration of advanced technologies.

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Using SIOP to Drive Revenue, Margin, & Working Capital Predictability & Improvement

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PLANNING
Demand & Supply Execution: It's All About the Order

The sales order is one of the most critical signals in demand and supply management because it represents committed customer demand. It isn't a projection but an order the company must fulfill. In a well-run supply chain, the sales order becomes the anchor that aligns demand with supply decisions as it ties customer needs with planning, inventory, and operations. In more than 80% of clients, quickly understanding sales order status, where the order is in the process, the responsible party to move the sales order to the next step, and the expected ship date/ available to promise (ATP) drives customer and EBITDA success. Proactively managing the sales order is integral to supply chain transformation and is a key input **SIOP** (Sales Inventory Operations Planning) success.

The Importance of the Sales Order
The sales order is fundamental to demand management because it represents the conversion of expected demand into committed demand—and that shift is where demand management either succeeds or breaks down. Effective demand management isn't just about building a good forecast. It's about continuously reconciling the forecast with reality, and the sales order is the clearest signal of that reality. However, it doesn't stop there. Sales orders measure forecast accuracy in real-time, it evolves as new information becomes available, enables the prioritization of demand, becomes integral to the fulfillment of demand, plays a key role in SIOP and the proactive alignment of demand and supply, and provides customer level demand intelligence.

Custom Manufacturing & the Sales Order
In custom manufacturing environments (engineer-to-order ETO, configure-to-order CTO), sales orders are vital to fulfillment. Typically, these companies will follow a pipeline with potential orders/ orders moving from potential opportunities (revenue estimates) to configured and priced quotes (CPQ) to sales orders (as quotes are won and turn into firm commitments). The bridge between opportunities (typically managed via CRM systems such as Salesforce) to quotes (typically managed via CPQ systems and/or complex spreadsheets and engineering programs) and sales orders (managed via ERP systems and related technologies such as customer-connected systems) becomes essential and is where 80% of the improvement opportunity typically lies. As they make it to sales orders, it is the beginning, not the end. For clients that support building and construction, parts lists, installation sets and release schedules are an important translation of orders into

executable deliveries. For all custom products, tracking the progression through process steps (order processing, design engineering, manufacturing engineering, bom and routing setup, planning, operations, assembly, processing services (such as paint), shipping, and more becomes key to gaining visibilty, predictability and serviceability for customer and company success.

E-commerce (B2B/ B2C) & the Sales Order
In e-commerce (B2B and B2C) environments, the sales order becomes even more critical because it is generated in real time, at scale, and with immediate customer expectations. The sales order is directly tied to the customer promise and typically require Amazon-like service (same-day or next-day). In this case, sales orders typically come through e-commerce portals such as Shopify, Salesforce Commerce Cloud, and Adobe Commerce and must have real time access to inventory availability and available to promise (ATP) delivery dates. These systems must bridge real time to your order management system (OMS) which is part of ERP for planning and then ERP typically bridges to warehouse management systems (WMS) for fulfillment of the orders on the warehouse floor. Each sales order triggers a rapid execution process inclusive of order routing, pick, pack and ship processes, and last-mile delivery coordination. Order status remains integral with the key to success relying on immediate visibility for customers throughout the order fulfillment cycle inclusive of returns and reverse logistics. E-commerce environments experience demand swings due to promotions and customer trends, therefore relying on robust demand planning and sales forecasting business systems.

The Importance of the Sales Order
All businesses from aerospace to healthcare products rely strongly on the sales order. Sales orders come via many channels including EDI, vendor managed inventory (VMI) programs, customer portals, emails automated with artificial intelligence, phone calls, etc., and flow into the ERP system for planning, execution and fulfillment. Depending on the supply chain network, fulfillment and freight requirements, the order will flow through WMS systems, 3PL / 4PL networks and transportation management (TMS) systems for delivery to the customer. No matter the complexity and use of systems, the sales order remains key to success. It is typical for clients to organize cross-functional groups to monitor order status and ensure on-time and quick delivery. It becomes vital as past due increases and supply chain resources want to get ahead of changing conditions and ensure customer success.

Blockchain and the Sales Order
Blockchain and the sales order intersect around a single objective: creating a trusted, real-time, and tamper-proof record of demand and fulfillment across the supply chain. While ERP and WMS manage transactions internally, blockchain extends the visibility of the sales order across organizational boundaries to customers, suppliers, logistics providers, and financial partners. In essence, blockchain creates a shared ledger where the sales order and its status updates are visible to all authorized participants, thereby creating full supply chain visibiltiy inclusive of financial flows. Although this sounds ideal for all scenarios, it is complex and expensive and so best utilized when multiple independent parties share trusted data, and there is a high risk of disputes or fraud, and supply chains are complex and globally distributed. For example, food and beverage, pharmaceuticals & life Sciences, aerospace and defense, and global shipping have pursued this functionality.

Demand Planning and the Sales Order
The sales order is essential to demand planning and sales forecasting process. Sales forecasts reflect expected demand, and sales orders reflect actual demand. Sales forecasts are based on sales order bookings trends and/or sales order shipment trends, adjusted for seasonality and statistical trends. Sales orders are integral to tracking consumption vs the forecast so that it can be adjusted for real time changes to demand. Sales orders also provide real time insight into forecast accuracy.

SIOP and the Sales Order
SIOP (Sales, Inventory & Operations Planning) and the sales order are tightly linked because they represent two different levels of demand management working together. SIOP reflects the forward-looking plan whereas sales orders reflect the real time execution signal for that demand. Our best clients see sales orders as the most stable form of

demand since they are attached to firm commitments. In today's supply chain, the customer expected dates can move around significantly; however, companies generally consider them to be committments wtihin a reasonable timeframe. Thus, SIOP forecasts might dig down into multple layers of sales order segments to reflect vaious levels of firm timing and/or customer requirements. For example, in custom manufacturing, sales orders in engineering are less firm in timing vs orders in planning which are more secure but not as secure as those orders in manufacturing (work-in-process, WIP) or in inventory. In customer centric enivironments, capturing sales order demand by key customers provides valuable insights. SIOP wlil also translate sales order demand in addition to other demand streams (quotes, forecasts, spares, independent demand) into capacity requirements to proactively plan manfuacturing operations, warehousing and storage requirements, transportation needs for equipment, labor, costs, etc. To learn more about how to rollout SIOP effectively, download our eBook, "**SIOP: Creating Predictable Revenue and EBITDA Growth**".

ERP, Artificial Intelligence and the Sales Order

ERP and sales orders are inseparable because the sales order is one of the central transactions that drives everything inside the ERP system. Entering, managing, monitoring, and tracking status of the sales order occurs in ERP and is essential to ensuring customer, revenue and execution success. ERP uses the sales order to connect demand and supply and provide real time visibilty into order status, shipments, and returns.

Artificial intelligence is transforming the management of sales orders. Whether incorporated in ERP or peripheral technologies, traditional order entry of sales orders is being automated. AI can interpret sales order information from emails, customer portals, and other sources, create sales orders and send to appropriate resources for review and approval. Or, you can set up modern systems to approve automatically wtihin limits or guidelines. AI systems will also follow up on order status and communicate with customers if desired. If the date is going to move slightly or if the company wants to send a notification when shipped, AI can automate a notification to the customer. Agentic AI systems can perform tasks such as "follow my order" and can follow up on order status and automate communications and receive feedback. To learn more about utilizing AI, download our eBook, "How AI Powers Smart Supply Chains and Smarter Decisions".

Fulfillment of the Sales Order & Revenue Predictability

The fulfillment of the sales order is integral to revenue predictability and ensuring profitable growth. In most organizations, planners are responsible for forecasting revenue for the month and quarter based on order backlog management, fulfillment forecasts, and other demand inputs (quotes, customer forecasts, spares/ aftermarket, etc.). Every client that comes to us with struggles related to revenue forecasting, service, lead times, and inventory availability requires a concentrated focus on order processing and order backlog management. 100% of custom manufacturers require emphasis on the quote to order conversion process and tracking order status / gaining supply chain visibility of the end-to-end supply chain and order fulfillment processes. E-commerce clients require a focus on demand management, sales forecasting, and the automation of sales orders. Almost every client needs additional focus on order backlog management and sales order consumption of demand to adjust forecasts in real time.

Case Study: Aerospace Manufacturer Focuses on Orders to Improve Service

An aersopace manufacturer struggled to forecast revenue and fulfill orders on-time with changing customer conditions and last minute requirements. They dramatically improved service levels by rolling out forecasts for largely secure upcoming demand (using independent demand sales orders to drive their ERP system) and accompanied that with a SIOP (Sales Inventory Operations Planning) process to better align demand with supply (capacity, materials). Although they went from the 60%s in service level to the 90%s, it was not enough. Thus, they focused additional attention on their order processing and order backlog processes, and integrated engineering, planning and operational execution into a cross-functional coordination process.

The keys to success in driving dramatic improvements in service levels included teh following:

- **New products**: The NPI (new product introduction) planners were incorporated into the planning team and engaged in the prioritization of production capacity and order fulfillment process.
- **Outside processing**: It is always the peripheral processes under less control, requiring extra steps and coordination with outside resources that create havoc. Thus, they integrated the orders and resources related to oustide processing steps into the backlog process and increased reliability.
- **Independent Demand:** HIghly likley future customer orders (sales forecasts) were captured via independent demand in the ERP system. In essence, they were added as expected customer orders and managed carefully with changing customer conditions, customer committments, etc. By including these orders, the cross-functional team was prepared to fulfill long lead time items and secure capacity on the production lines. Because the team was cautious, they only included orders that were 80-90% likely to occur and maintained over 90% forecast accuracy.
- **Materials availability:** Involving the materials planners and procurement resources in the cross-functional team was integral for tracking material availability and estimated time of arrival (ETA) of incoming purchase orders. As much as they could gain access to end-to-end supply chain visibility, the better for fulfilling customer orders and managing exceptions.
- **Capacity availability**: By understanding order priorities, independent demand (high likelihood upcoming orders) and comparing with equipment and labor capacity by work centers/ machine groups, the Operations team could plan ahead accordingly, work with Engineering proactively to program machines, adjust shifts, and feed production lines with materials to ensure product availability for orders. By developing this business intelligence (BI) view, we gained corporate approval to hire critical machinists to address bottlenecks.
- **Proactive date management**: Customer Service was involved in the the cross-functional team, proactively managed customer due dates with customers and kept the ERP system maintained, and followed up with customers with options, priorities and for expedite requests.

The team delivered results. Service levels went up to the high 90%s and the client achieved improved status on key customer scorecards. Proactively managing orders was integral to success.

Case Study: Industrial Equpiment Manufacturer Had to Scale Rapidly to Meet Customer Needs

An industrial equipment manufacturer struggled to keep up with customer requirements and meet growth goals. Although part of the issue was ramping up production capacity and capabilities, a key bottleneck to meeting customer needs was the proactive management from opportunities to configured quotes to customer orders, release schedules and the successful fulfillment of that demand to meet installation schedules. Sales was frustrated with the lack of visibilty of when order releases would ship, production was frustrated with the constant schedule volatility, and purchasing was frustrated with the lack of visibilty to which plants needed key commodity deliveries with sufficient lead time as mills do not change over for frequent emergencies. The team focused on the following priorities to turn around the situation:

- **Order configuration & bridge to sales order**: As it always key in custom manufacturing, the order configuration and bridge to the sales order was integral to the process. The IT team rolled out CPQ functionality and built a bridge to ERP, improving this process beyond 80%+ of clients.
- **Installation & order releases**: In building and construction customer environments, this is always a hot topic. Thus, automation was rolled out to enhance the abiltiy to translate blanket sales orders into release schedules with specific dates based on installation.
- **Automation of order processing:** The team rolled out additional automation capabilities to support more efficient order processing.
- **Order status visibility & priority**: This became a critical step in gaining visibility of what was expected to come down the pike with whatever level of product detail could be derived. By gaining clarity of what was in engineering vs planning vs assembly etc., the team could better manage the process. For example, by gaining

an idea of operational capacity requirements and priorities, the team could provide Engineering with priorities, thereby freeing up critical items.

- **Customer expected date visibility:** As the team rolled out advanced ERP and MES (manufacturing execution system) system functionality to better support master planning and production scheduling and the prioritization of the order releases, they were better able to determine and maintain realistic customer expected dates. This provided vital visibility to Project Management and the Sales team.
- **Proactive management of order changes**: As is typical in these types of environments, installation schedules and order releases move constantly. Thus, the team build several supply chain planning tools and automation capabilities to maintain production schedule priorities to make the successful fulfillment of orders as efficient as possible. This also led to greater operational efficiency and improved the abiltiy to scale.

These strategies delivered results. Sales could count on customer expected date visibility, Operations could count on capacity forecasts and evaluated opportunities to optimize service, freight and operational capacity, Engineering could get ahead of changing customer priorities to work on the "right" item for the "right" place at the "right" time, and Purchasing could gain a better view into demand. Thus, the company could scale effectively and meet growth goals.

The Bottom Line
The intersection of demand and supply is at the sales order. Our most successful clients focus attention on the inception of the sales order to the successful fulfillment of the sales order. Not only does this approach improve the customer experience, but it also delivers EBITDA (earnings before interest, depreciation and amoritization) and improved working capital.

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Effective Backlog Management to Rapidly Improve Service

Listen to a Client Example Case Study

Thrilled to share our client's success story related to key improvements in capacity to support aggressive sales growth and gain visibility, the upgrade of MRP to improve customer service and optimize operations, and developing a proactive approach to achieving inventory objectives. Our client discusses process upgrades, ERP optimization, and collaborative success.

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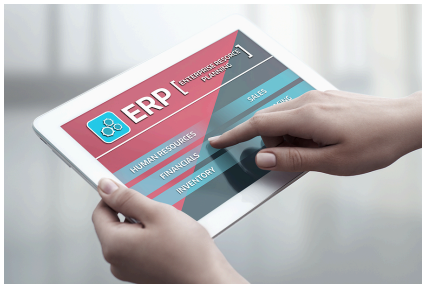
ERP & RELATED TECHNOLOGIES
ERP As the Backbone of Supply Chain



Supply chain transformations and upgrades require the improved use of ERP. There is no doubt about it - ERP is the backbone of supply chain performance. Clients come to us to improve performance (typically profitable growth, customer service, and cash flow), and the better utilization of ERP was a key part of 100% of these clients and was required to deliver bottom line results. ERP and related technologies including **artificial intelligence** (typically embedded in ERP and/or provided with peripheral systems) are cornerstone to creating predictability, serviceability, resiliency, scalability, sustainability (ensuring clients can maintain progress) and profitability.

ERP Underpins Supply Chain Upgrades
There are countless ways to utilize ERP to support supply chain effectiveness. Refer to our capstone article, "**Utilizing ERP - Case Study in Automating and Enhancing Visibility & Performance**" for examples from managing prospective customers to the order fulfillment process inclusive of planning, purchasing, operations, and logistics. ERP and supply chain go hand-in-hand for every potential client interested in growth, service, and automation. We'll discuss common situations and how they relate back to utilizing ERP.

- **Interested in turning potential customers, projects or orders into firm customer orders?**
  Our best clients utilize CRM (customer relationship management) functionality to track the sales pipeline, organize accounts and contacts, provide intelligent insights for customer/ prospective customer meetings, track sales and customer activity, monitor opportunities and quotes, and gain business intelligence and predictive analytics information for growing the business and serving customers.
- **Struggling to configure products rapidly to support customer needs?**
  Configure price quote (CPQ) system functionality supports the rapid configuration of products and prices to support customer requests while better communicating upcoming needs to engineering, planning, purchasing, operations, and supply chain functions. Custom manufacturers that utilize CPQ are dramatically more responsive and shorten lead times significantly vs the competition.
- **Do you want to automate big pricing books to improve accuracy & save time?**

In addtiion to CPQ functionality for custom manufacturers (as pricing becomes a complex puzzle wtih hundreds of lists and spreadsheets otherwise), ERP pricing modules are essential in replacing big books of price sheets. They will incorporate standard price lists (which often sound far simpler to rollout than reality), customer or channel specific pricing, quantity breaks, discounts, and promotions, etc. Multiple clients went from the infamous price book and guru to utilizing ERP functionality to accelerate, improve, and scale.

- **Frustated in having real time access to answers when customers contact you?**
  There are several areas of ERP functionality that support Customer Service and arm these resources with real time information to proactively communicate with customers and respond to inquiries. Customer portals, order management functionality, order status visibility, and inventory availability functionality provide critical answers. For example, available to promise (ATP) functionality provides insight upfront on whether you can commit to a customer order, how much you can commit, and when you can deliver it based on current and expected supply. Order management functionality, order status visibility, and inventory availability functionality.
- **Struggling with past due or extended lead times?**
  ERP is integral to resolving past due issues and shortening lead times as these issues relate back to several core ERP functionality topics. From deamnd and order related functionality (CRM, CPQ, sales forecasting, order management, pricing, ATP) to planning (MPS, MRP, DRP), purchasing, operations (CRP, boms, routings, work centers, inventory, MES), shipping, receiving, warehousing, and returns, the solution always involves the use of ERP. Artificial intelligence and advanced technologies also are integral as inventory availability, dynamic optimization, and predictive insights are key to success.
- **Interested in improving operational visibility and performance?**
  To improve operational performance, you need proactive planning systems (MPS, MRP, DRP), optimized production schedules, clear capacity and labor plans (CRP), operational readiness (boms, routings, work centers, MES), material supply (relates back to planning and purchasing systems), and a clear view of priorities (order status, customer priorities, service policies, shipping schedules), reporting (BI) etc.
- **Is outside processing a bottleneck?**
  In almost every client that requires outside processing (such as powder coating, anodizing, etc.), it is a bottleneck. ERP functionality can assist, at a minimum automate and improve visibility, as outside processing involves purchase orders, work orders, tying the two together, order status, etc.
- **You want to get Sales and Operations on the same page?**
  ERP is cornerstone to the **SIOP** (Sales Inventory Operations Planning) process to align demand with supply and get Sales and Operations singing off the same sheet of music. Starting with forecasts, quotes and orders, and translating sales order demands into production and distribution plans, capacity plans and fulfillment plans, the sales order is integral to the process. These plans also result in inventory projections, cash flow forecasts, capital equipment / capital expenditure needs, pricing and product recommendations, and mix and lead time impacts.
- **Struggling to ensure customer and margin success with your supply chain network?**
  As companies navigate shipping, import/ export, a network of distribution and/or service centers, and 3PLs, ERP functionality is key to achieving customer value while automating tasks and efficiently delivering goods to customers. For example, shipping, receiving, inventory transactions, cycle counting, order allocation, warehouse management systems (WMS), transportation management systems (TMS), and other functionality supports the efficient and effective delivery of products.

Process and ERP are intertwined. To gain additional insights on process upgrades, refer to our article, "**5 Ways to Improve Processes**". Results will follow.

Supply Chain Upgrade with ERP

Since supply chain and ERP go hand-in-hand, it is imperative that you design your transormation and upgrade projects to focus on the people, process, and the use of ERP

and related systems. A few best practice strategies we've found to yield substantial results include:

- **Kick-off**: Assemble the appropriate resources with a cross-functional focus related to the supply chain upgrade (inputs, outputs, and the upgrade), provide the vision/ reasoning behind the upgrade, the key milestones and/or phases, how feedback/ inputs will be incorporated, and detail specific next steps so that everyone knows what's coming down the pike.
- **Rapid assessment/ understanding of current state:** Depending on the upgrade, the team should perform a rapid assessment and/ or gain an understanding of the current state, what is important to achieving results, what issues the users are experiencing, ideas for improvement, etc.
- **Design the upgrade**: It is essential to bring process and systems expertise together to design the upgrade collaboratively. Since it might involve customer and supplier requirements, inputs and outputs, connections between systems, step-by-step process nuances, daily work routines (involving both manual and systems steps), the use of IoT, artificial intelligence and advanced technologies, and other critical factors, the design is the 80/20 of success. We find that the people who have robust capabilities in process, systems, integration/ connections, data, and integraion with hardware/ equipment and IoT devices are hard to find. Thinking three steps ahead and seeing down-the-line impacts is even harder to find. Source the appropriate ERP resources, consultants, technology resources, and other talent as needed.
- **Test the upgrade**: As you roll out the upgrade and utilize ERP functionality, it is important to test that the upgrade performs and achieves the outputs and results that you expect. In more than 80% of the situations, there will be tweaks and/or adjustments to incorporate into the upgrade.
- **Pilot the upgrade**: Piloting the process upgrade allows you to test your design with normal conditions. For example, ERP upgrades frequently work in a silo, but experience issues when other transactions are occuring and when volumes are normal. Performing a pilot allows you to incorporate these nuances while also engaging and educating the team.
- **Develop & manage the implementation plan**: Since rubber meets the road in execution which drives 80% of success, developing a detailed implementation plan and managing the project upgrade closely is key to success.
- **Training & education**: To ensure the team understands the step-by-step procedures as well as the reasoning behind the upgrade and the down-the-line impacts, training and education must be accompanied with the upgrade. Most ERP upgrades fail with training alone. The first mistake occurs, and everything comes to a halt.

Much of these recommendations refers back to strong project and program management. Thus, while rolling out your supply chain business systems upgrade, remember to stay focused on the critical path. Refer to our article, "**10 Ways to Stay Focused on the Critical Path**" for additional tips for success.

The Bottom Line
ERP and the supply chain must go hand-in-hand because the supply chain is the operation—and ERP is the system that makes it visible, coordinated, and executable at scale. Although you can find companies that largely function in spite of ERP and those with top tier ERP systems that don't perform well, every successful client relies on the coordinated approach of people, processes, ERP and related technologies, and associated metrics.

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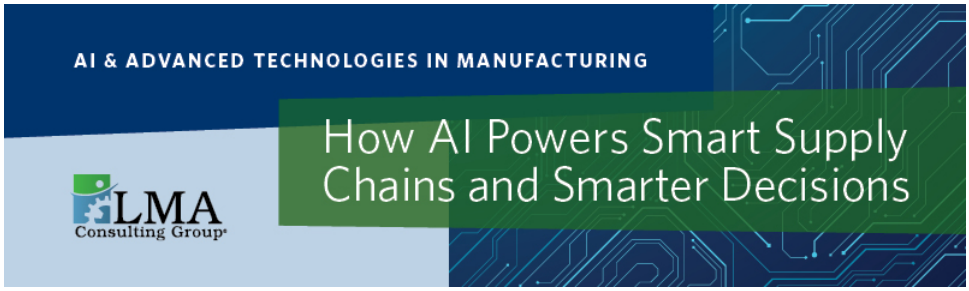

Experience in Working with LMA

Our client Armacell talks about their experience in working together from the CEO, General Manager of Operations, Integrated Business Planning (Supply Chain/ SIOP), and Sales point-of-view

Connections

THIS MONTH'S REQUESTS:

- If you have a supply chain or operations position, post it on our Association for Supply Chain Management Chapter (ASCM/ APICS) **website**.
- Do you know a top notch family law attorney with key clients in Southern California area interested in growing his/her business and meeting top-notch trusted advisor colleagues in the Inland Southern CA area? If so, I lead a group of top notch trusted advisors (with hybrid capabilities), **ProVisors** Ontario group, and we have an opening for someone interested in super charging their network, stimulating commerce, community and collaboration. Please introduce ***me***.
- If you know of a strong, hands-on planing/ supply chain leader in Southern California interested in a job at an innovative, growing company, **contact me**.

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